

FIG 1A

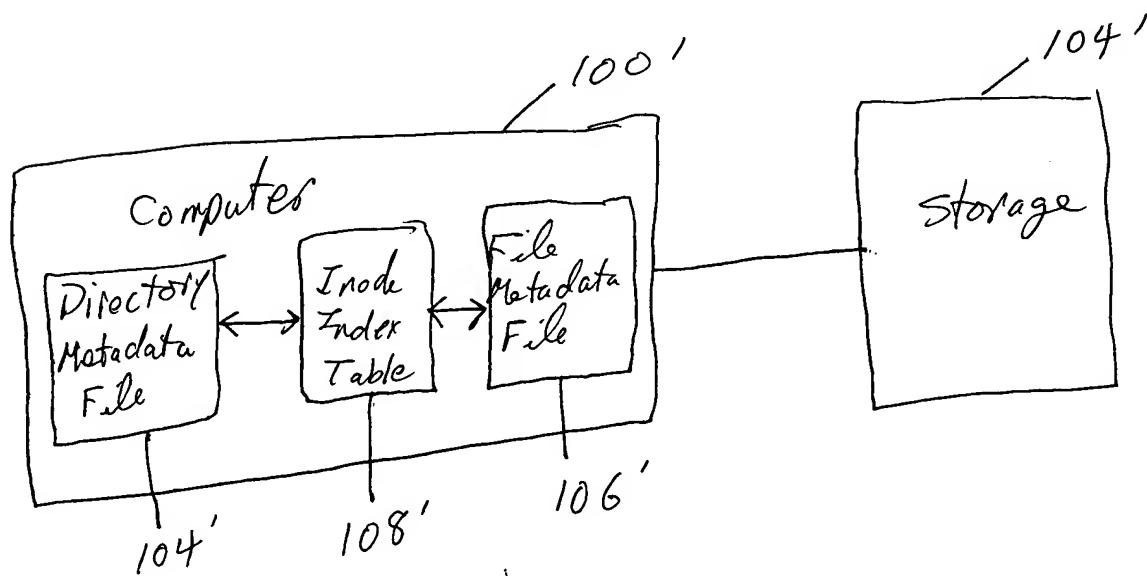


FIG 1B

Record 1
OFFSET = 0

| | | | | | | | | | | | | | | | |
|------|----------------|-----------------|-------------|------|------|------|------|------|------|------|------|------|------|------|--|
| 202a | 210a | 210b | 210c | 200a | 210c | 200a | 210b | 210c | 200a | 210c | 200a | 210b | 210c | 200a | |
| 5 | {PICTURES, 6}, | {DOCUMENTS, 7}, | {DATA, 100} | | | | | | | | | | | | |

DIR ECTORY
META DATA
FILE

Record 2
OFFSET = 100, 00

| | | | | | |
|------|-----------------|-----------------|------|------------------|------|
| 202b | 210d | 210c | 210c | 210f | 200b |
| 100 | {C1. DAT, 101}, | {C2. DAT, 102}, | ... | {C100. DAT, 201} | |

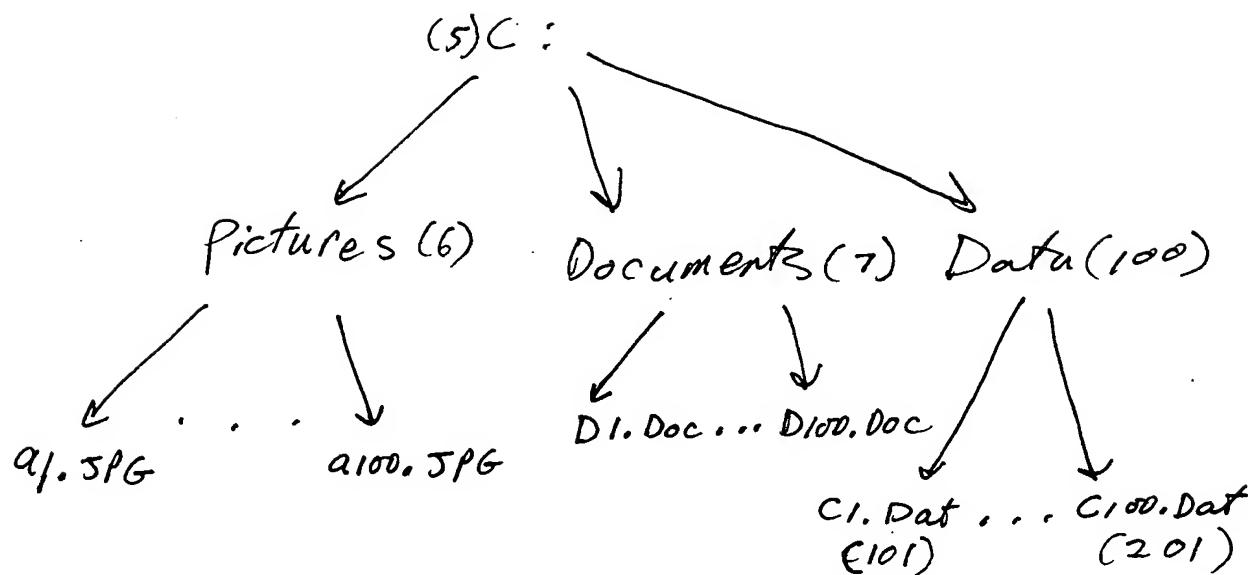
RECORD 3
OFFSET = 100, 00

| | | |
|------|------|------|
| 202c | 210c | 200c |
| 7 | ... | |

RECORD 4
OFFSET = 860, 1100

| | |
|------|------|
| 202d | 200d |
| 6 | ... |

FIGURE 2



File
Metadata

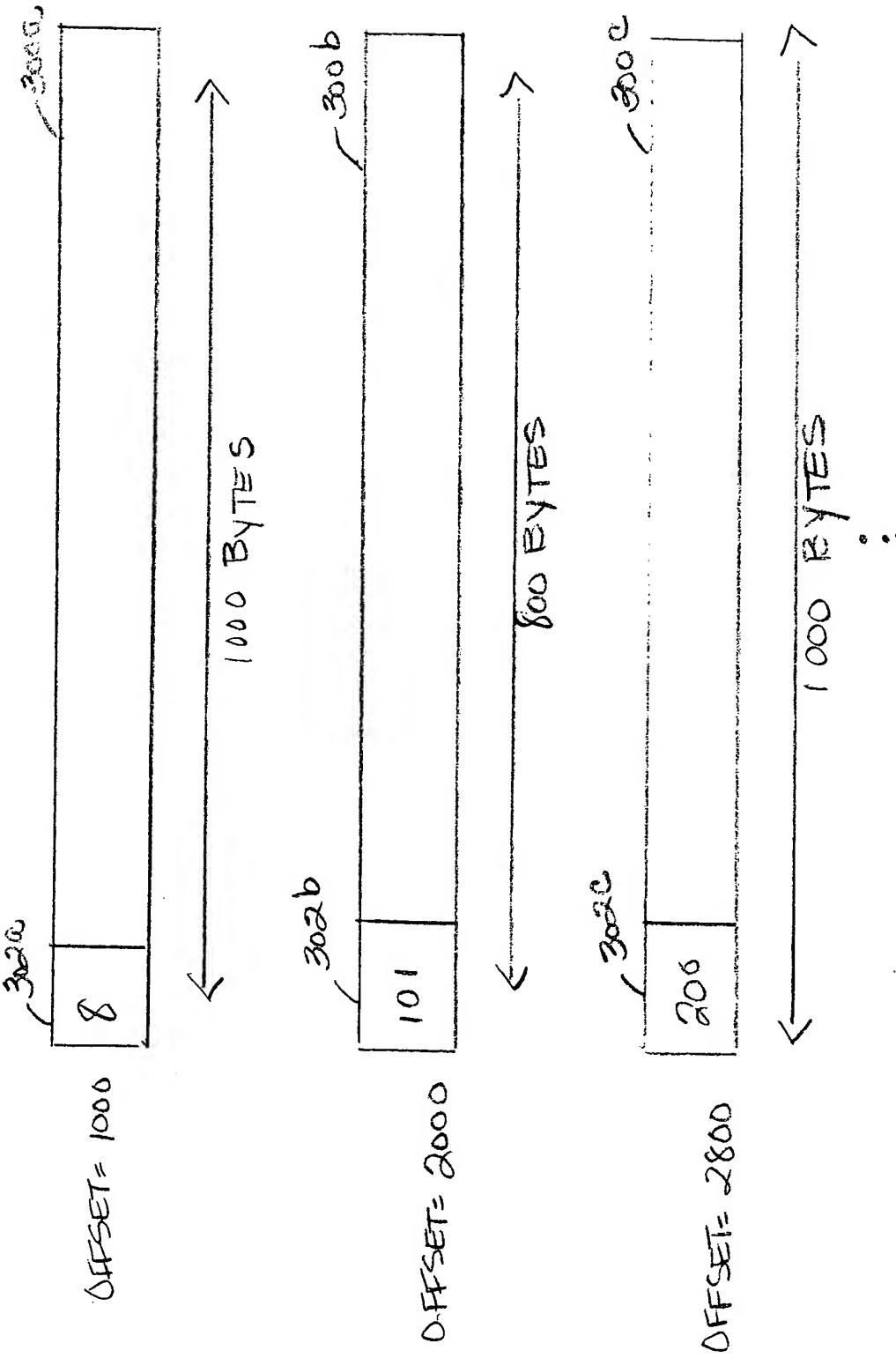


FIGURE 4

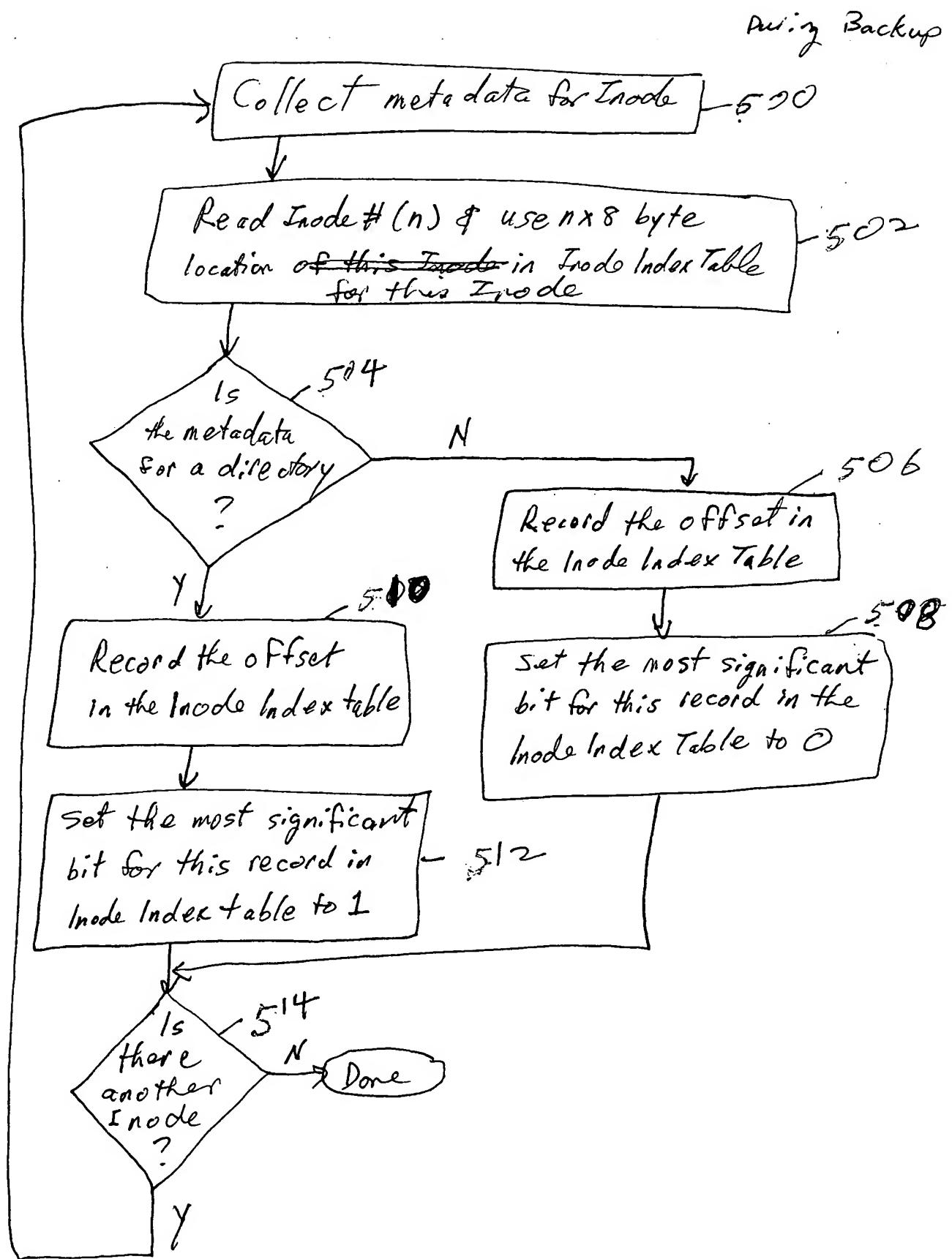


FIG 5

MSB
(DIR/File)

| | offset | |
|---|-----------------|------|
| 1 | (offset = 0) | 600a |
| 1 | (offset = 180) | 600b |
| 1 | (offset = 260) | 600c |
| 0 | (offset = 1000) | 600d |
| ⋮ | ⋮ | ⋮ |
| 1 | (offset = 100) | 600e |
| 0 | (offset = 2000) | ⋮ |
| ⋮ | ⋮ | ⋮ |
| 0 | (offset = 2800) | 600z |
| ⋮ | ⋮ | ⋮ |

← 8 bytes →

FIG 6 A

| MSB (DIR/ File) | Inode | offset | |
|-----------------------|-------|-----------------|---------|
| 1 | 5 | (offset = 0) | - 600a' |
| 1 | 6 | (offset = 180) | - 600b' |
| 1 | 7 | (offset = 260) | - 600c' |
| 0 | 8 | (offset = 1000) | |
| 1 | 100 | (offset = 100) | ⋮ |
| 0 | 101 | (offset = 2000) | |
| 0 | 200 | (offset = 2800) | - 600z' |
| | | | |
| | | | |
| | | | |

← 8 bytes → 8 bytes →

FIG 6B

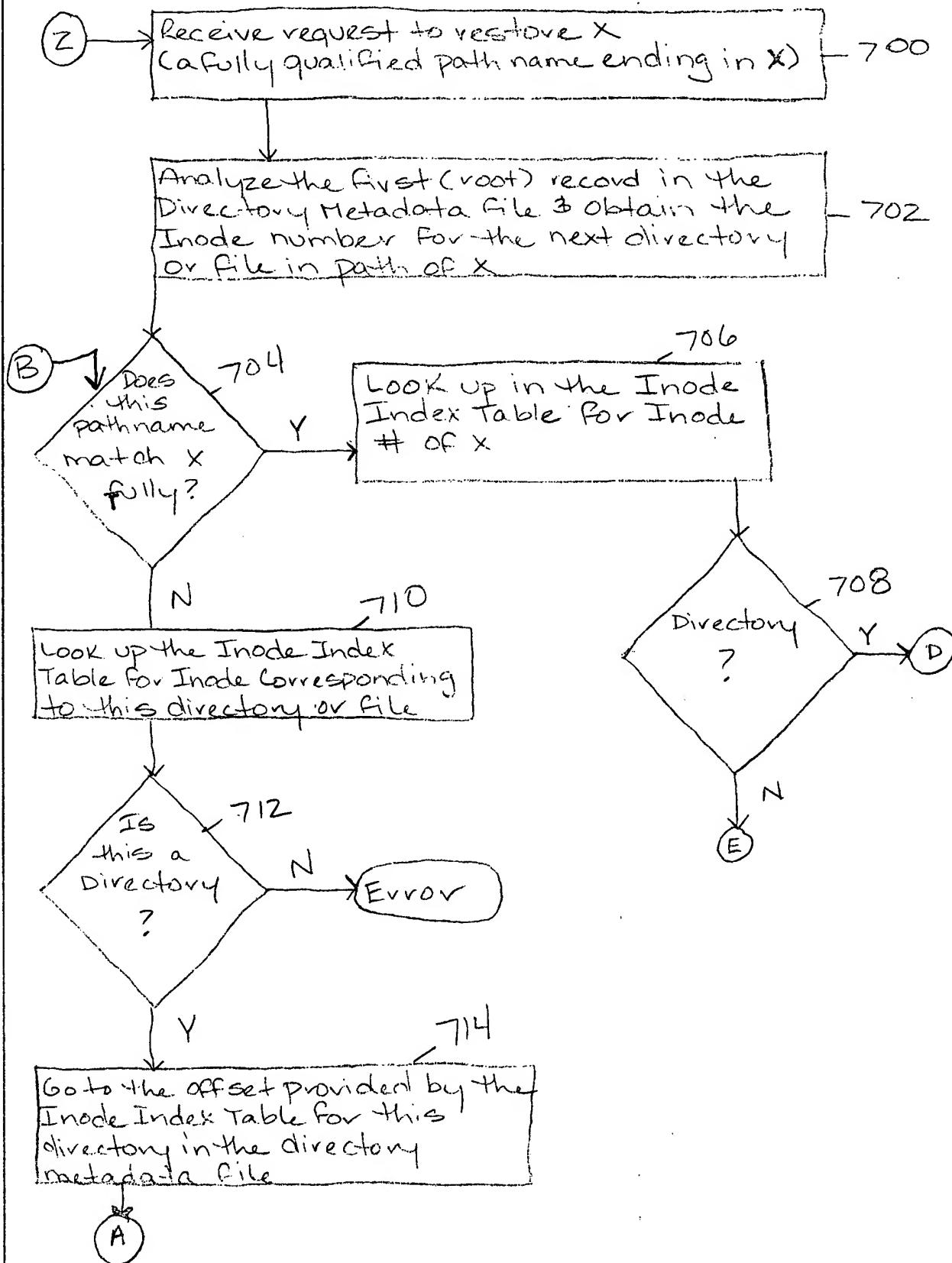


FIG. 7A

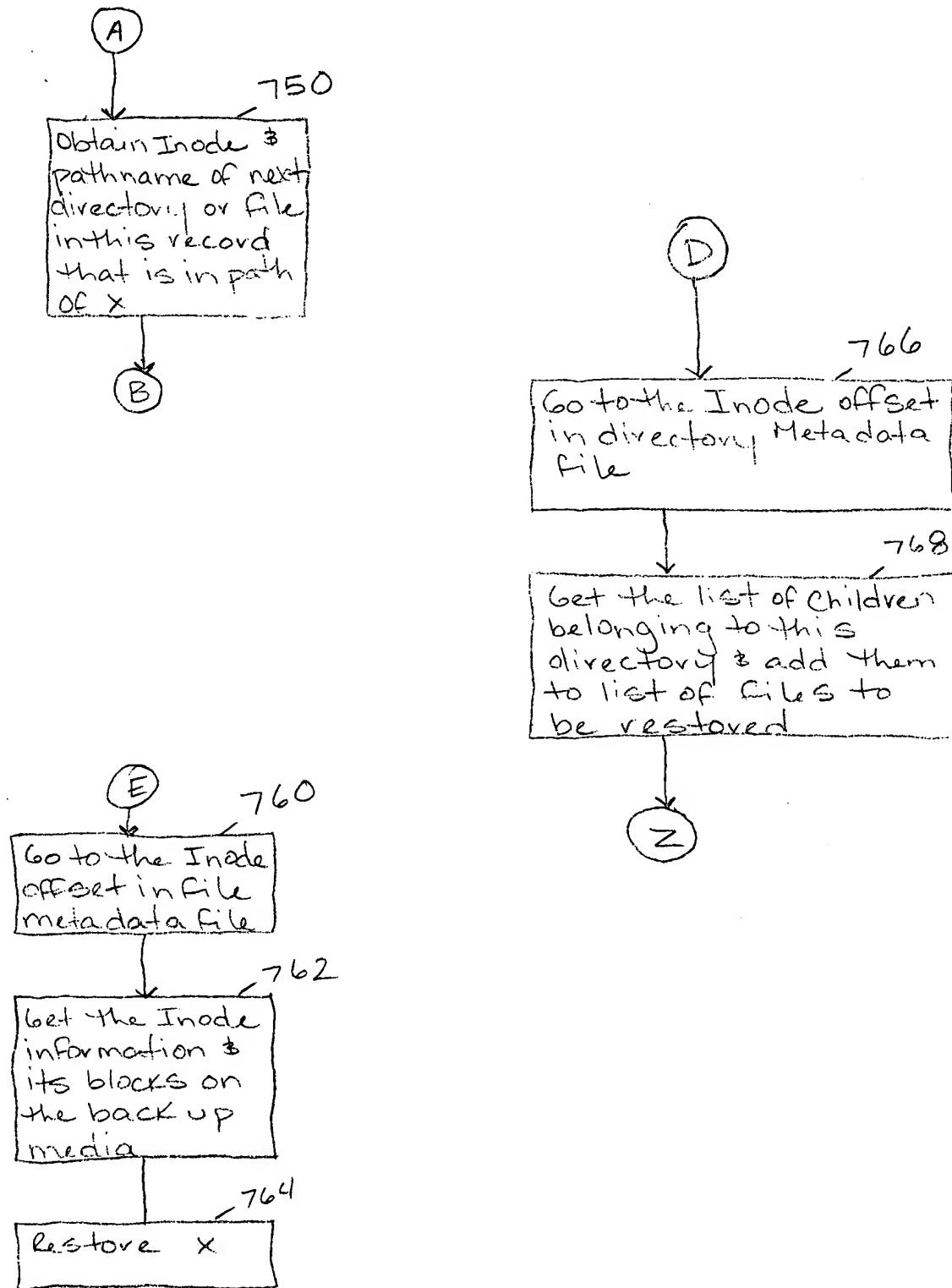


FIG. 7 B

During Restore file

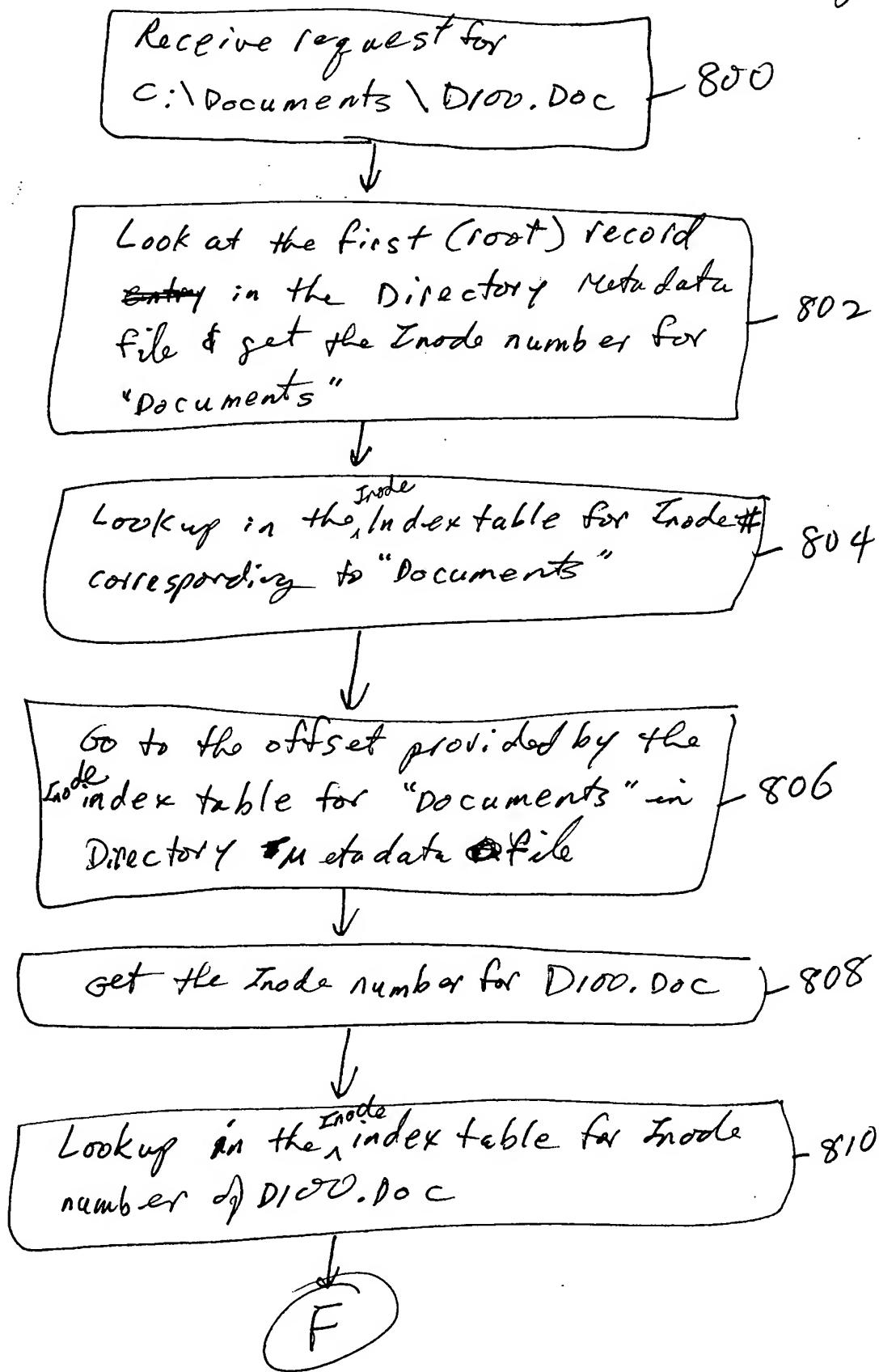


FIG 8
FIG A

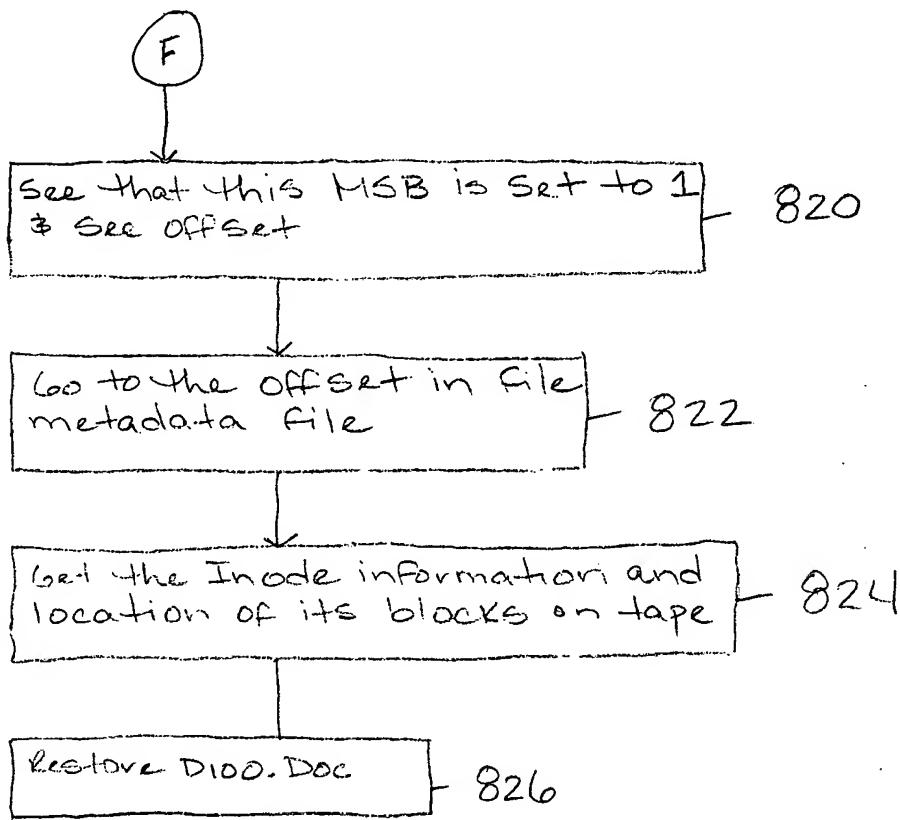


FIG. 8B

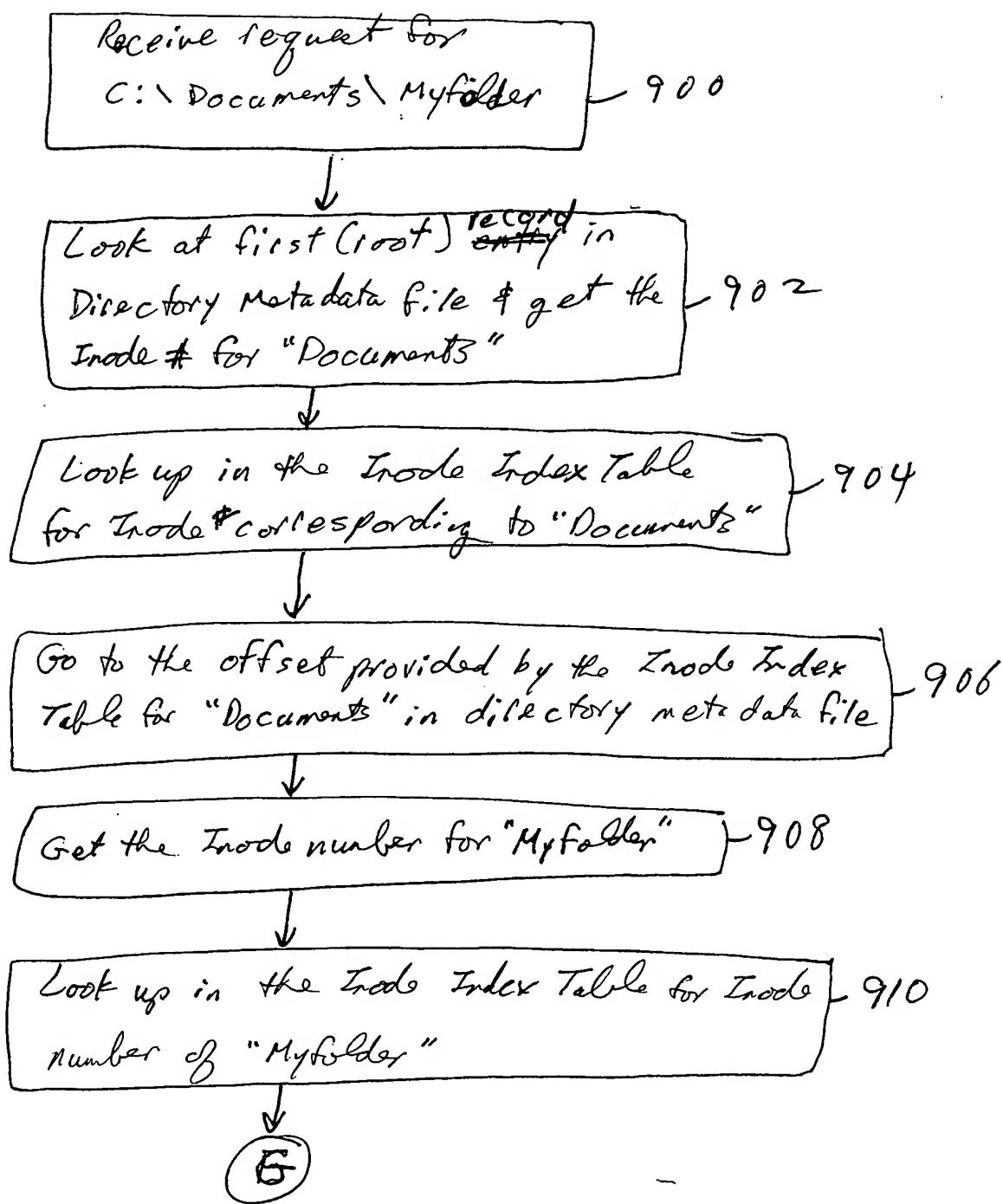


FIG 9A

6

See that this MSB is set to 0
& see offset

920

Go to the offset in Directory metadata file

922

Prepare a list of the children of "Myfolder" &
add them to the list of files to be restored

924

Get next item in list of files to be
restored

926

Restore children of "Myfolder"

928

FIG 9B